## REMARKS

In the Office Action, the Examiner objected to claims 8 and 9. Claim 8 has been amended. Claim 9 depends on claim 8. Claim 8 recites "modulated" values, color or hue. Claim 9 recites also modulated as a function of B-mode or color flow signals. In claim 9, information is modulated by two things, so "also" is appropriate.

The Examiner rejected claims 1-6, 11, 13, and 16-21 pursuant to 35 U.S.C. §102(b) as anticipated by Yoshihiro (JP 10-94519). Claim 11 was rejected pursuant to 35 U.S.C. §102(b) as anticipated by Yoshiya (JP 02-161934). Claims 8-9 and 14 where rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Yoshihiro and Yoshiya. Claims 13-15 were rejected pursuant to 35 U.S.C. §103(a) as being unpatentable over Yoshiya and Mo, et al. (U.S. Patent No. 6,733,455). Claims 7, 10, and 12 were objected to as allowable if amended into independent form. Applicants respectfully request reconsideration of the rejections of claims 1-6, 8-9, 11 and 13-21, including independent claims 1, 5, 11, and 20.

Independent claim 1 recites determining a rate of change of a parameter and displaying a change in the parameter over time as a function of the rate of change. Yoshihiro does not disclose this limitation. Yoshihiso determine the shape of a blood vessel wall (paragraph 12). Using fluid dynamics, the rate of blood in the vessel is calculated (paragraph 31). For the fluid dynamics, a pressure is used to determine the rate or velocity (paragraphs 31 and 35-36). For each heart cycle phase, a new calculation is made based on a new wall shape (paragraph 47). For a given phase, the rate, pressure, and direction are calculated for a plurality of locations. However, rate is not rate of change. Pressure is not rate of change. Direction is not rate of change. Yoshihiro does not disclose determining rate of change.

Indcpendent claim 5 recites tracking a flow direction, identifying locations as a function of flow direction, and assigning display values as a function of other display values. Yoshihiso does not disclose these limitations. Yoshihiro dctcrmine flow direction and magnitude in a still picture (paragraphs 45-47). The animation of Figure 7 merely shows the calculations for a sequence of different tires (paragraphs 47-48). The flow direction is calculated for each image, not tracked. Display values are calculated for each image independently.

Independent claim 11 recites generating a first pattern for pixels of a first image and generating a second pattern for pixels associated with a second image, where the second pattern is responsive to the first pattern. Yoshihiso and Yoshiya do not disclose these limitations.

Yoshihiro use fluid dynamics to calculate flow rate, direction and pressure in each image of a sequence. The calculations of one image appear to be independent of the other images. Yoshihiro do not disclose the pattern for one image responsive to the pattern of another image.

Yoshiya determine velocities for each of a sequence of images (page 4, 2nd to last paragraph). Acceleration between pairs of velocity images is determined (page 4, last paragraph and page 5, 5th and 6th paragraphs). The acceleration is displayed as a gray stripe in a color flow map (page 5, 6th paragraph). By determining acceleration between different pairs of images, a sequence of acceleration images may be generated (page 6, 2nd-4th paragraphs). Yoshiya determine acceleration for each image independently of acceleration for a previous image. Yoshiya do not suggest one pattern being responsive to another pattern.

Independent claim 20 recites a persistent pattern shifted in an image relative to another image. Yoshihiro calculates the pattern for each image independently. Any pattern similarity is arbitrary, and is not a persistent pattern shifting in an image.

Dependent claims 2-4, 6, 8-9, 13-19, and 21 depend from one of the independent claims above, so are allowable for the same reasons. Further limitations patentably distinguish from the cited references.

Claims 2-4 recite rate of change, so are allowable.

Claim 6 recites a pattern of one image responsive to a pattern of another image, so is allowable.

Claims 18 and 19 recite a shifted pattern, so are allowable.

Claim 21 recites tracking and values of one image being a function of values of another image, so is allowable.

**CONCLUSION**:

Applicants respectfully submit that all of the pending claims are in condition for allowance and seeks early allowance thereof. If for any reason, the Examiner is unable to allow the application but believes that an interview would be helpful to resolve any issues, he is respectfully requested to call the undersigned at (650) 943-7554 or Craig Summerfield at (312) 321-4726.

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